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ABSTRACT

This paper focuses on second language (L2) acquisition, and the extent to which Universal Grammar (UG) accounts for second language learners' behavior. A comparison of L2 research, especially research conducted within the UG framework, with first language (L1) research, reveals a striking difference in the evaluation of L2 results: while L1 acquisition data is used to influence linguistic theory, L2 data are rarely, if ever, used to influence linguistic theory. Anaphoric binding is described to illustrate the importance of a bidirectional, rather than unidirectional view of L2 research. Theoretical assumptions behind the binding theory research of Hirakawa (1990) and Finer (1991) are identified: (1) anaphoric binding involves a parameter whose values generate languages in a subset relation; (2) the Subset Principle should guide the learner in acquiring this parameter, so that the smallest value compatible with the data is adopted; and (3) negative evidence is not useable in L2 acquisition. It is shown that experimental results from L2 learners of English with Japanese speakers studied by Hirakawa (1990) and with Korean, Japanese, and Hindi speakers studied by Finer (1991), in combination with their theoretical assumptions, lead to a sequence of acquisition that is predicted to be impossible. However, adopting an alternative binding theory, one that assumes a bidirectional view of the observed acquisition sequence, removes the paradox presented by the L2 acquisition data. (Contains 24 references.) (JP)

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The responsibility of linguistic theory to second language acquisition data*

Dawn MacLaughlin, Boston University

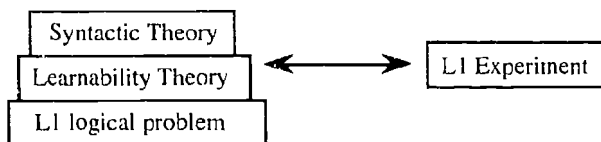
Overview

This talk will focus mainly on second language acquisition. The question of whether or not Universal Grammar is available (in whole or in part) to (adult) second language learners has been the focus of much of the recent research on second language acquisition. Researchers working with a Principles and Parameters approach to linguistic theory have generally reached agreement that UG is available to L2 learners, as evidenced by the recent workshop on second language acquisition held at MIT in January, 1993 - where the availability of UG was not a debated issue. However, questions of exactly to what extent UG is available, and what is the influence of the first language are still highly volatile issues.

By accepting UG's availability, one is also accepting the position whereby L2 learners' grammars are possible grammars. Therefore, UG should be able to account for second language learners' behavior, just as UG is held accountable for first language data (both child and adult). However, if you survey the research that has been done on second language acquisition, particularly that done within the UG framework, and compare it with L1 research, you might be surprised to discover that there is a striking difference in the way L2 results are evaluated, as compared to L1. The focus of this talk is to highlight this difference and argue that it should not exist. These points are summarized in (1).

- (1)
 - UG is accessible to adult L2 learners
 - UG should be held accountable for L2 learners' interlanguage
 - There is a difference in how the results of L2 research is evaluated, as compared to L1 research

In order to illustrate this difference, we must look at how L1 and L2 research is generally conducted. Focusing on L1 research first, the illustration in (2) represents schematically one way of viewing L1 research.



(2) Schematic View of L1 Research

This illustration divides L1 research into two sides - the theory side and the experimental side. The theory side is further divided into 3 components: the L1 logical problem, Learnability Theory, and Syntactic Theory. In designing an L1 experiment, the researcher adopts a particular position with respect to each of these three components. For example, for the L1 Logical Problem, the

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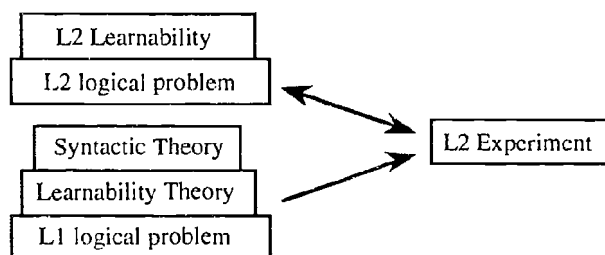
researcher might assume that negative evidence is not available to the child (as is generally done). Concerning Learnability Theory, the researcher might select from a number of existing hypotheses about how language is learned (e.g., Strong Continuity, Weak Continuity, Maturation, Subset Principle, Lexical Learning Hypothesis). For syntactic theory, the researcher adopts a particular formulation of the principles and parameters of UG. Taken together, these assumptions make certain predictions about the course of L1 acquisition, some of which are the focus of a particular experiment.

The results of the experiment may match the predictions or not. In the case of a match, then the researchers assumptions can be claimed to receive support. However, in the case of a mismatch, further explanation is needed. Because the important underlying assumption is that UG is at work in the L1 learner (ignoring maturation complications), such explanation usually takes the form of revising the theory of UG, or the learnability theory. This is the critical point - L1 acquisition data is used to influence linguistic theory.

Some examples of L1 research that have influenced both syntactic theory and learnability theory are listed in (3). One of the first attempts to use L1 data to formulate UG theory can be found in Nina Hyams's dissertation work on the acquisition of properties related to the pro-drop parameter. Chomsky, in his Kyoto lectures, says about Hyams's work that it is "an example of a hypothesis about universal grammar deriving from language acquisition studies that might be tested by linguists, rather than the converse, as in the usual practice." Other examples include: (1) Solan (1987), who proposed certain revisions of the Binding Theory in order to bring it in line with his acquisition data; (2) Chien and Wexler (1990), who suggest that binding theory should be divided into a syntactic component and a pragmatic component (containing pragmatic Principle P), in order to account for "apparent" Principle B violations; (3) Radford (1990), who analyzes early child English and proposes a maturational account wherein the early child grammar contains only lexical categories - the functional categories mature; and (4) work by Clahsen and his colleagues (e.g., Clahsen, Eissenbeiss, and Vainikka, 1992; Clahsen, Parodi, and Penke, 1992), who propose what has been called the Weak Continuity Hypothesis. Similar to Radford, this hypothesis presumes that early child grammar contains only lexical categories (or perhaps a highly reduced set of functional categories), but the creation of new functional categories is triggered by the input data, not by maturation.

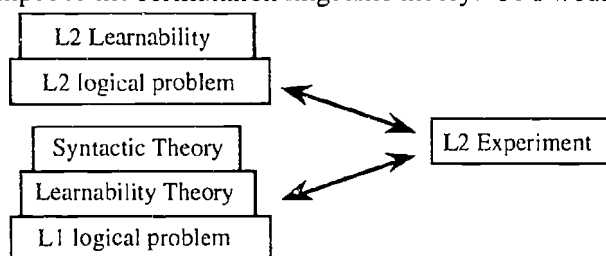
- (3) L1 research which has influenced linguistic theory:
Hyams (1986); Solan (1987); Chien and Wexler (1990); Radford (1990);
Clahsen, Eissenbeiss, and Vainikka (1992); Clahsen, Parodi, and Penke (1992)
- (4) Chomsky (Kyoto Lectures), on Hyams
"an example of a hypothesis about universal grammar deriving from language
acquisition studies that might be tested by linguists, rather than the converse, as in the
usual practice."

Now let's turn to the second language picture (5) to see how it differs from L1 (2). First, we find that we must add two additional components on the theory side. These are the "L2 logical problem" and the "L2 learnability" boxes. Concerning the L2 logical problem, L2 researchers working in the UG framework generally assume that it is the same as in L1 - importantly, negative evidence is not systematically available to guide L2 acquisition. But since this is an issue which is still subject to some debate (as is the L1 version), I am keeping it separate from the "L1 logical problem" box. My intention is to capture issues like transfer and markedness in the L2 learnability box.



(5) Schematic view of L2 research (unidirectional)

Again, these aspects of theory combine to make specific predictions about L2A which can be tested experimentally. As before, if the experimental results match the predictions, then the theoretical assumptions are supported. But in the case of a mismatch, explanation is needed. It is the nature of this explanation that differs from the case of L1. Generally, a mismatch is often taken to indicate that something is different about L2 acquisition, for example, that some parameter setting is somehow unavailable to the L2 learner. L2 results are rarely, if ever, used to influence the linguistic theory. This is represented by the unidirectional line in (5). I think it is a mistake to take this unidirectional view of L2 acquisition. I would like to propose that L2 data, like L1 data, is a viable input to the formulation linguistic theory. So I would like to propose the picture in (6).



(6) Schematic of L2 research (bidirectional)

The remainder of this talk will be devoted to looking at a particular area of L2 research, that of anaphoric binding, in order to illustrate the importance of the bidirectional picture (6). Using the experiments of Hirakawa (1990) and Finer (1991) as examples, I will first outline their theoretical assumptions concerning the logical problem of L2A, binding theory, and learnability. Next, I will present their experimental results, and show how these results, in combination with their theoretical assumptions, lead to a paradox. Finally, I will show that the only way to resolve this paradox is to change the theory - supporting the bidirectional view in (6).

L2 Binding Research: Theoretical Assumptions

1. Binding Theory

Both Hirakawa and Finer assume the binding theory of Manzini and Wexler (1987, see also Wexler and Manzini, 1987). This theory departs from the standard binding theory of Chomsky (1981) by parameterizing the binding principles. Focusing on anaphors, the binding theory Principle A (7) requires that an anaphor be bound by a compatible antecedent within some restricted domain. Manzini and Wexler's work parameterizes this binding domain; in order to account for cross linguistic variation. So while English shows a somewhat restricted set of anaphoric binding possibilities (8), other languages like Italian (9), Russian (10), Icelandic (11), and Japanese (12) allow more.¹

- (7) Principle A.
An anaphor is bound in its governing category by a proper antecedent.
- (8) English *himself*
 - a. Fred_i looked at John's_j pictures of himself_{*i/j}.
 - b. Fred_i believes John_j to have seen himself_{*i/j}.
- (9) Italian *sè*
 - a. Alice_i vide Mario_k guardare sè_{i/k} nello specchio.
Alice saw Mario look at Refl in the mirror
'Alice saw Mario look at self in the mirror.'
 - b. Alice_i guardò i ritratti di sè_{i/k} di Mario_k.
Alice looked at portraits of Refl of Mario
'Alice looked at Mario's portraits of self.'
- (10) Russian *svoj*
 - a. Profesor_i poprosil assistent_j čitat' svo_j_{i/j} doklad
professor asked assistant to-read self's report
 - b. Vanja_i znaet čto Volodja_j ljubit svo_j_{i/j}-u žen-u
Vanja knows that Volodja loves self's wife
- (11) Icelandic *sig*
 - a. Jón_i segir að María_k elskar sig_{*i/k}.
'Jon says that Maria loves self.'
 - b. Jón_i segir að María_k elski sig_{i/k}.
'Jon says that Maria loves(subjunctive) self.'
 - c. María_i skipaði Haraldi_k að raka sig_{i/k}.
'Maria ordered Harald to shave self.'
 - d. Jón_i heyrði lysingu Mariu_k af sér_{i/k}.
Jon heard description Maria(gen) of self
'Jon heard Maria's description of self.'

¹ Examples (9), (11), and (12) are from Manzini and Wexler (1987). Examples (10) are from Progovac (1992). Note that there are some questions concerning the status of the Italian examples in (9) - see MacLaughlin (1993) for discussion.

- (12) Japanese *zibun*
- a. John-wa_i [Bill-ga_k *zibun*-o_{i/k} nikunde iru] to omotte iru.
 John Bill Refl hates that thinks
 ‘John thinks that Bill hates self.’
 - b. John-wa_i [Bill-ga_k *zibun*-no_{i/k} syasin-o mihatte iru] to omotte iru.
 John Bill Refl pictures is watching that thinks
 ‘John thinks that Bill is watching pictures of self.’

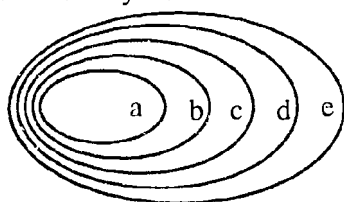
(13) *The Governing Category Parameter (GCP)*

XP is a governing category for α iff

XP is the minimal category that contains α , a governor for α , and has

- a. a subject; or (English)
- b. an Infl; or (Italian)
- c. a Tense; or (Russian)
- d. a “referential” Tense; or (Icelandic)
- e. a “root” Tense. (Japanese)

To account for this variation, Manzini and Wexler propose the Governing Category Parameter (13), which has five values. In order to account for the fact that a language may have multiple anaphors that behave differently, they propose that the GCP is set individually for each lexical item - there is no single setting for the grammar as a whole. In addition, they claim that as you progress downward in the parameter values, that is, as you move from a to e, each value allows a slightly bigger binding domain than the previous domain. So English has the smallest domain, Japanese the largest, and the others fall somewhere in the middle. In fact, Manzini and Wexler claim that the language generated by value a is a subset of b is a subset of c, etc. This is shown in (14).



(14) Subset relationship for Governing Category Parameter values

I should note that I have simplified Manzini and Wexler’s theory. The details aren’t that important. What is important is the proposal that anaphoric binding is subject to systematic cross-linguistic variation, and this variation is to be captured via the Governing Category Parameter, which is a subset parameter.

2. Learnability

Again following proposals of Manzini and Wexler (1987), both Hirakawa (1990) and Finer (1991) assume that a particular learning principle called the Subset Principle (15) is relevant to the acquisition of the governing category parameter.

(15) *Subset Principle* (Wexler and Manzini, 1987)

The learning function maps the input data to that value of a parameter which generates a language:

- (a) compatible with the input data; and
- (b) smallest among the languages compatible with the input data.

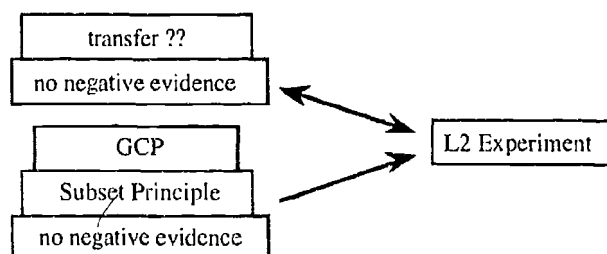
Briefly, the Subset Principle is a learning principle that has been proposed, originally by Berwick (1985) and refined by Manzini and Wexler, to prevent language learners from getting into a situation where negative evidence is needed in order to converge on the target grammar. Such a situation can arise if the learner somehow adopts a grammar which is a superset of the target grammar, perhaps through a mistake in parameter setting. Consider again the governing category parameter. As we have already seen, each setting allows a progressively larger set of binding possibilities. The languages generated by the settings of this parameter fall into subset relations. If an L1 learner of English mistakenly adopts an incorrect setting, for example, value *e*, the setting for Japanese *zibun*, then this learner will be stuck in a superset grammar. Note that value *e* is compatible with all the English input the learner will receive. However, the learner's grammar will permit strings parallel to the Japanese examples in (12) which are ungrammatical in the target grammar. The only way this learner could then acquire the correct English grammar would be through negative evidence, e.g., evidence that sentences like the Japanese ones in (12) are not grammatical. But this negative evidence is not available to L1 learners. Since L1A is successful, the L1 learner must be able to avoid this trap somehow. The Subset Principle has been proposed as the principle which is responsible for keeping the L1 learners out of trouble, so to speak. The Subset Principle requires the learner to always select the smallest grammar that is compatible with the observed input data. So a learner guided by the Subset Principle could never mistakenly pick value *e* - value *e* can only be adopted if it is triggered by appropriate positive evidence.

3. L2 Logical problem

Both researchers assume that the L2 logical problem is the same as the L1 problem. Crucially, they assume that negative evidence does not influence L2 acquisition.

4. Summary

To summarize, the Hirakawa (1990) and Finer (1991) studies can be represented by the picture in (16). They assume that anaphoric binding involves a parameter whose values generate languages in a subset relation. They assume that the Subset Principle should guide the learner in acquiring this parameter, so that the smallest value compatible with the data is adopted - a larger value is adopted only if the evidences suggests it. And they assume that negative evidence is not useable in L2A.



(16) Schematic of L2 Binding Research

This combination of assumptions leads to the following prediction (17): in acquiring the governing category parameter, (L1 and L2) learners should progress from value *a* towards value *e*. Crucially, it is not possible for acquisition to proceed in the reverse direction.

(17) Prediction:

For the governing category parameter, any acquisition sequence exhibited by L2 (or L1) learners must involve development from a subset grammar to a superset grammar (towards value *e*). An acquisition sequence in the reverse direction, from superset to subset (towards value *a*), is impossible.

L2 Binding Research: Experimental results

I will now turn to two studies on L2 learners acquisition of anaphoric binding properties - Hirakawa (1990) and Finer (1991). Both studies examined L2 learners of English with a variety of L1s. Finer used Korean, Japanese, and Hindi speakers, while Hirakawa used Japanese speakers. The Hindi subjects were found to behave like native speakers, so I will not discuss them further. Table in (18) provides a summary of the subjects used in these two experiments, including the number of subjects in each of the experimental and control groups, the L1s of the experimental groups, and the GCP value of the L1s.

(18) Summary of L2 subjects:

L1	GCP	Hirakawa (1990)	Finer (1991)
Japanese	<i>e</i>	65	20
Korean	<i>e</i>	--	30
Hindi	<i>c</i>	--	29
English*	<i>a</i>	20	--
Japanese*	<i>e</i>	22	20
Korean*	<i>e</i>	--	30

*control groups

Subjects in both experiments were tested on their knowledge of anaphoric binding in two main contexts - finite clauses and nonfinite clauses. Finer used 2 clause test items exclusively, while Hirakawa used both 2 clause and 3 clause items. The experimenters employed different tasks. Finer used a picture identification task, where the subject had to select the picture which matched the test item from a set of possibilities. Hirakawa used a multiple choice task, where subjects were required to select the correct antecedent(s) from a list of choices. The experimental designs

are summarized in the table in (19). Despite this difference in tasks, the two experiments came to similar conclusions. I turn to their results now.

(19) Summary of experimental designs

	Hirakawa (1990)	Finer (1991)
test items	2 clause (+/- finite) 3 clause (+/- finite)	2 clause (+/- finite)
task	Multiple Choice	Picture ID

First, the results of these studies strongly support the operation of UG - the L2 learners were not found to be behaving in ways that would support the notion that they have "wild" or "rogue" grammars. I will not comment on this point further.²

The table in (20) shows the L2 group data for both studies. Hirakawa's data shows that her Japanese L2 subjects behave neither like the English controls nor like the Japanese controls, as they allowed more long-distance binding than did the English, but less than the Japanese. Unfortunately, Finer didn't use an English control group. However, his subjects seem to have performed remarkably well, although they allowed slightly more long-distance binding in nonfinite contexts. One might conclude that Finer's subjects appear to be more advanced than Hirakawa's.

(20) Responses of L2 subjects, in percentages

	Hirakawa (1990) (adapted from table 6*)			Finer (1991) (adapted from table 2)			
	E on E	J on E	J on J	J on J	J on E	K on E	K on K
Finite							
local	98	72.5	18	24	92	98	19
long	2	27.5	82	76	8	2	81
Nonfinite							
local	98	55	15	25	81	91	17
long	2	45	85	75	19	9	92

*Responses of *don't know* or *someone else* have been removed by Hirakawa.

E on E means English L1 subjects on English sentences,

J on E means Japanese L1 subjects on English sentences, etc.

On the other hand, the individual subject data is much more revealing than the group data (Hirakawa actually provides the individual subject results in an appendix, while Finer just discusses them). Finer argues that his subjects have acquired an intermediate GCP value, namely value c, as these subjects seem to allow long-distance binding only in nonfinite contexts. Hirakawa claims that some of her subjects have acquired the correct English value, as some make no errors. In fact, by looking at her data closely, I have found that some of her subjects also seem

² Thomas (1991) contains a commentary on Finer (1991), including a discussion of the "rogue" grammar issue.

to have the intermediate value (c).³ The tables in (21) show the distribution of Hirakawa's subjects relative to what GCP setting they seem to have - a, c, or e, under various conditions.⁴

(21) Number of Hirakawa's L2 subjects exhibiting various GCP parameter settings

a. 2 clause sentences only

GCP(a)	GCP(c)	GCP(e)
16	12	37

b. 2 and 3 clause sentences

GCP(a)	GCP(c)	GCP(e)
10	7	48

c. 2 clause sentences only - 1 error

GCP(a)	GCP(c)	GCP(e)
21	22	22

d. 2 and 3 clause sentences - 1 error

GCP(a)	GCP(c)	GCP(e)
16	7	42

The Paradox

In interpreting their results, both Hirakawa and Finer paint a picture wherein the L2 learners initially transfer their L1 setting, and then some are able to acquire the English setting, perhaps passing through a stage where they have acquired an intermediate setting. The L2 learners show a sequence of acquisition from GCPe -> GCPc -> GCPa. In other words, these learners are exhibiting a sequence of acquisition which is predicted to be impossible (cf. (17))!

(22) Experimental result:

L2 learners show an acquisition sequence from GCPe -> GCPc -> GCPa.

This sequence is predicted to be impossible (cf. 17) !!!

Paradox Resolved

How is this paradox to be resolved? While Hirakawa offers no explanation as to how this sequence of acquisition is possible,⁵ Finer suggests a solution which involves (re)interpreting Manzini and Wexler's Spanning Hypothesis as a "functional principle" which is somehow able to

³ For some reason, Hirakawa does not think that any of her subjects have the intermediate GCPc setting. However, her data clearly show that some subjects allow long-distance binding only out of nonfinite clauses - behavior which is better described as exhibiting GCPc than GCPe.

⁴ The table in (21a) only includes the results from the 2 clause test items, while (21b) includes both 2 clause and 3 clause test items. Hirakawa did find a difficulty effect for the 3 clause items (at least in the finite clause case). Tables (21c) and (21d) show the distribution of subjects under the condition where 1 error (and only 1 error) is ignored in evaluating their GCP setting (for example, if a subject exhibited GCPc on all test items except 1 - where GCPe was implicated, the subject would be classified as GCPc in tables (21c,d) but GCPe in tables (21a,b).

⁵ Hirakawa does suggest in a footnote that the L2 subjects may have been able to use indirect negative evidence, that is, they may have been able to notice the lack of long-distance binding in the L2 and change their grammar accordingly. An explanation relying on learning from indirect negative evidence would need to be accompanied by a learning theory which could account for how this learning takes place - particularly, the circumstances under which a learner rules out (by changing the grammar) an unheard structure (see Pinker, 1989, for discussion). Until such a theory is formulated, a solution relying on indirect negative evidence is not viable.

guide parameter setting. There are many problems with this solution which I will not get into here (see MacLaughlin (1993) and Kapur et al., (to appear) for critique of Manzini and Wexler's Spanning Hypothesis). I consider finer's explanation to be untenable, so we are still left with the problem of resolving this paradox.

- (23) Finer's solution to the paradox relies on Manzini and Wexler's (1987) Spanning Hypothesis. For critique of the Spanning Hypothesis, see Kapur et al. (to appear) and MacLaughlin (1993).

In order to resolve the paradox, we can either question the data or question the theory. Let's assume that the data is correct, i.e., that it does show that L2 learners can somehow progress from a "long-distance" grammar to a "local" grammar. Given that this result has been replicated in several experiments (Finer's is actually a replication of a pilot study of Finer and Broselow, 1986) and that the Hirakawa and Finer experiments involved different tasks, this seems like a reasonable assumption.

So let's reexamine our theoretical assumptions, which are summarized in (24).

- (24) • no negative evidence
• learning is guided by the Subset Principle
• the Binding Theory and the Governing Category Parameter

Concerning negative evidence, Hirakawa explicitly states that her subjects have not received any instruction concerning the interpretation of English anaphors (Finer reports that his subjects had formal instruction in English, but he does not specify whether or not this instruction included information on anaphor interpretation). Since negative evidence was not available to these learners, it could not have been responsible for the paradoxical acquisition sequence.

Next, we could abandon the Subset Principle and suggest that either (1) the Subset Principle is not relevant to acquisition at all, either L1 or L2;⁶ or (2) L2 learners, unlike L1 learners, are not in fact guided by this principle.⁷ Whether or not the Subset Principle is active in this case does not actually help us. Even if we abandon the Subset Principle, we still need to find an explanation for the sequence of acquisition shown by these L2 learners - we still must account for how they are able to move from a long-distance grammar to a local grammar.

So we are left with the Binding Theory, and in particular, the GCP. The reason why the observed acquisition sequence is predicted to be impossible is because the GCP is a subset

⁶ MacLaughlin, 1993 argues that the Subset Principle has yet to be shown relevant to the acquisition of UG parameters.

⁷ In investigations of the operation of the Subset Principle in L2A, several researchers have concluded that the Subset Principle is unavailable to L2 learners (see the summary in White, 1989). MacLaughlin (1992) refutes this proposal. Note also that the conclusion that the Subset Principle is not operative in L2A is a prime example of L2 researchers concluding that there is a difference between L1A and L2A (the unidirectional view), instead of questioning the theoretical assumptions (the bidirectional view).

parameter. Since its parameter settings fall into subset relations, acquisition is predicted to only proceed in one direction. However, an alternative Binding Theory which could account for the crosslinguistic variation without involving a subset parameter could potentially permit the sequence of acquisition exhibited by our L2 learners. This is the solution that I would like to pursue.⁸

Following recent binding proposals, some of which are listed in (25), I would like to suggest that the results of the L2 binding research supports an alternative view of binding which does not involve a subset parameter, and which allows an acquisition sequence to proceed in both directions - from a local grammar to a long-distance grammar and from a long-distance grammar to a local one. What these proposals have in common is that they recognize the important role of the morphological structure of the anaphoric element, although they differ in their accounts of the long-distance binding mechanism.

- (25) For recent binding proposals, see, for example, Pica, 1987; Cole, Hermon, and Sung, 1990; Reinhart and Reuland, 1991; Koster and Reuland, 1991 and references therein; Progovac, 1992.

I would like to suggest that the morphological structure of the anaphoric element provides the evidence needed to acquire either local or long-distance binding. Specifically, morphologically simplex anaphors, that is, anaphors composed of a single reflexive element which is underspecified for Φ -features, such as Japanese *zibun*, may enter into long-distance binding relations. But morphologically complex anaphors, anaphors composed of a reflexive element plus a pronominal element with Φ -features, like English *himself*, may not be long-distance bound. This proposal is summarized in (26).

- (26) Morphologically simplex anaphors composed of a single reflexive element which is underspecified for Φ -features (*zibun*) may be long-distance bound;
morphologically complex anaphors composed of a reflexive element plus a pronominal element with Φ -features (*himself*) may not be long-distance bound.

Japanese learners of English might initially analyze English anaphors as simplex, allowing them to be long-distance bound. Once they recognize the complex nature of the anaphor, they should only exhibit local binding.^{9,10}

⁸ I first suggested this solution in MacLaughlin (1992).

⁹ Progovac and Connell (1991) independently argue for a similar hypothesis. They claim that the long-distance binding errors exhibited by L2 learners of English stem from a mis-analysis of the English anaphor as simplex, and they support their argument with evidence from two L2 learners (the L1s are Serbo-Croatian and Mandarin Chinese).

¹⁰ As one might expect, the facts of binding are much more complicated than presented here. Arguably, the binding theory needs to account for the Blocking Effect exhibited by Chinese, and the lexical variation found in Icelandic. The various binding proposals listed in (25) tend to focus on a solution to one aspect of the problem, at the expense of others. I believe that investigations into how L2 learners acquire these aspects of binding could shed some light on the theory, just as the investigations into long-distance vs. local binding have.

In sum, we have seen that the paradox arose because the GCP, a subset parameter (in combination with the no negative evidence assumption), made the wrong prediction: the GCP predicted acquisition to be possible only in one direction, yet L2 research has shown that acquisition is possible in the opposite direction. By adopting an alternative binding theory, we have removed the paradox that was presented by the L2 acquisition data.

Conclusions

To conclude, the main purpose of this talk was to stress that experimental evidence from L2 acquisition research is a viable input to the formulation of linguistic theory. L2 researchers who adopt the position that UG is active in L2A are adopting the position that the L2 data should be accounted for within UG theory. However, L2 research very rarely is used to influence linguistic theory - instead, it is often used to propose differences between L1A and L2A (e.g., to support a partial UG access position, wherein particular (learning) principles or parameter settings are no longer available). In examining the research on L2 binding, I showed how the results presented a paradox which could not be resolved by hypothesizing some difference between L1A and L2A, but only by changing the syntactic theory of anaphoric binding.

References

- Berwick, Robert (1985). *The acquisition of syntactic knowledge*. Cambridge, MA: MIT Press.
- Chien, Yu-Chin and Wexler, Kenneth (1990). Children's knowledge of locality conditions in binding as evidence for the modularity of syntax and pragmatics. *Language Acquisition*, 1, 225-295.
- Clahsen, Harald; Eissenbeiss, Sonja; and Vainikka, Anne (1992). The Seeds of Structure: A syntactic analysis of the acquisition of case marking. submitted.
- Clahsen, Harald; Parodi, Teresa; and Penke, Martina (1992). Early IPs: Stage I in German Child Language. ms.
- Cole, Peter; Hermon, Gabriella; and Sung, Li-May (1990). Principles and parameters of long-distance reflexives. *Linguistic Inquiry*, 21, 1-22.
- Finer, Daniel L. (1991). Binding parameters in second language acquisition. In Lynn Eubank (Ed.), *Point Counterpoint: Universal Grammar in the Second Language* (pp. 351-374). Amsterdam: John Benjamins.
- Finer, D. & Broselow, E. (1986). Second language acquisition of reflexive binding. *NELS*, 16, 154-168.
- Hirakawa, Makiko (1990). A study of the L2 acquisition of English reflexives. *Second Language Research*, 6, 60-85.
- Hyams, Nina (1986). *Language Acquisition and the Theory of Parameters*. Dordrecht: Reidel.
- Kapur, Shyam; Lust, Barbara; Harbert, Wayne; and Martohardjono, Gita (to appear). Universal Grammar and learnability theory: The case of binding domains and the Subset Principle. In Eric Reuland and Werner Abraham (Eds.), *Knowledge and language: Issues in representation and acquisition*. Dordrecht: Kluwer.
- Koster, Jan and Reuland, Eric (1991). *Long-Distance Anaphora*. Cambridge: Cambridge University Press.
- MacLaughlin, Dawn (1992, October). *Second language acquisition and the Subset Principle*. Paper presented at the 17th annual Boston University Conference on Language Development, Boston.
- MacLaughlin, Dawn (1993). *Language acquisition and the Subset Principle*. submitted.
- Manzini, M. Rita and Wexler, Kenneth (1987). Parameters, Binding Theory, and learnability. *Linguistic Inquiry*, 18, 413-444.
- Pinker, Steven (1989). *Learnability and cognition: The acquisition of argument structure*. Cambridge, MA: MIT Press.
- Progovac, Ljiljana (1992). Relativized SUBJECT: Long-distance reflexives without movement. *Linguistic Inquiry*, 23, 671-680.
- Progovac, Ljiljana and Connell, Phil (1991). *Long-distance reflexives, Agr-SUBJECTs, and acquisition*. Paper presented at the 2nd meeting of FLSM, University of Michigan, Ann Arbor, MI.
- Radford, Andrew (1990). *Syntactic Theory and the Acquisition of English Syntax: the Nature of Early Child Grammars in English*. Oxford: Blackwell.
- Reinhart, Tanya & Reuland, Eric (1991). Anaphors and logophors: an argument structure perspective. In Jan Koster & Eric Reuland (Eds.), *Long-distance anaphora* (pp. 283-321). Cambridge: Cambridge University Press.
- Safir, Ken (1987). Comments on Wexler and Manzini. In Thomas Roeper and Edwin Williams (Eds.), *Parameter setting* (pp. 77-89). Dordrecht: Reidel.
- Solan, L. (1987). Parameter setting and the development of pronouns and reflexives. In Thomas Roeper and Edwin Williams (Eds.), *Parameter setting* (pp. 189-210). Dordrecht: Reidel.
- Thomas, Margaret (1991). Do second language learners have "rogue" grammars of anaphora? In Lynn Eubank (Ed.), *Point Counterpoint: Universal Grammar in the Second Language* (pp. 375-388). Amsterdam: John Benjamins.
- Wexler, Kenneth and Manzini, M. Rita (1987). Parameters and learnability in binding theory. In Thomas Roeper and Edwin Williams (Eds.), *Parameter setting* (pp. 41-76). Dordrecht: Reidel.
- White, Lydia (1989). *Universal Grammar and second language acquisition*. Amsterdam: John Benjamins.